

ABSTRACT

The present invention provides a novel polypeptide efficiently forming (R)-N-benzyl-3-pyrrolidinol, a
5 polynucleotide coding for said polypeptide, and use of the same.

The present invention relates to a polypeptide having the following physical and chemical properties (1) to (4):

(1) activity: acting on N-benzyl-3-pyrrolidinone
10 with NADH or NADPH as a coenzyme, to form (R)-N-benzyl-3-pyrrolidinol;

(2) optimum pH for activity: 5.5 to 6.0;

(3) optimum temperature for activity: 50°C to 55°C;

(4) molecular weight: about 55,000 as determined by
15 gel filtration analysis, about 28,000 as determined by SDS polyacrylamide gel electrophoresis analysis.

The present invention also relates to a polypeptide comprising the amino acid sequence shown under SEQ ID NO:1 in the sequence listing, a polynucleotide coding for said
20 polypeptide, and a transformant producing said polypeptide at high levels.

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